

Exhibit A

Dr. Chris Beyrer, M.D., M.P.H., *Declaration for Persons in Detention and Detention Staff, COVID-19* (April 16, 2020) (“Beyrer Decl.”)

Declaration for Persons in Detention and Detention Staff
COVID-19

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I, Chris Beyrer, declare as follows:

1. I am a professor of Epidemiology, International Health, and Medicine at the Johns Hopkins Bloomberg School of Public Health, where I regularly teach courses in the epidemiology of infectious diseases. This current semester, I am teaching the epidemiology course on emerging infections at Hopkins. I am a member of the National Academy of Medicine, a former President of the International AIDS Society, and a past winner of the Lowell E. Bellin Award for Excellence in Preventive Medicine and Community Health. I have been active in infectious diseases Epidemiology since completing my training in Preventive Medicine and Public Health at Johns Hopkins in 1992. Over the course of my career, I have at various times studied and published on the spread of infectious diseases within prisons.
2. I am currently actively at work on the COVID-19 pandemic in the United States. Among other activities I am the Director of the Center for Public Health and Human Rights at Johns Hopkins, which is active in disease prevention and health promotion among vulnerable populations, including prisoners and detainees, in the US, Africa, Asia, and Latin America.
3. I have been following the spread of COVID-19 throughout correctional and/or detention facilities in the United States and have the following observations and recommendations based upon my education and years of experience in the field of public health and epidemiology.

The nature of COVID-19

4. The SARS-nCoV-2 virus, and the human infection it causes, COVID-19 disease, is a global pandemic and has been termed a global health emergency by the WHO. Cases first began appearing sometime between December 1, 2019 and December 31, 2019 in Hubei Province, China. Most of the initial cases were associated with a wet seafood market in Wuhan City.
5. On January 7, 2020, the virus was isolated and identified. The virus was analyzed and discovered to be a coronavirus closely related to the SARS coronavirus which caused the 2002-2003 SARS epidemic.
6. On March 11, 2020, the World Health Organization ([WHO](#)) announced that the outbreak of COVID-19 is a pandemic. On March 13, President Trump declared a national emergency.
7. As of April 16, 2020, the [CDC](#) has confirmed 629,264 cases of coronavirus in the United States and 26,708 deaths. The [CDC](#) projects that over 200 million people in the United States could be infected with COVID-19 over the course of the pandemic without effective

public health intervention, with as many as 200,000 to 1.7 million projected deaths under a worst case scenario.

8. COVID-19 is a serious disease. There is no vaccine or known cure. The overall case fatality rate has been estimated to range from 0.3 to 3.5% in most countries, but over 7.0% in Italy. This is 5-35 times the fatality associated with influenza infection. COVID-19 is characterized by a flu-like illness. Overall, some 20% of cases will have more severe disease requiring medical intervention and support.
9. Once contracted, COVID-19 can cause severe damage to lung tissue, including a permanent loss of respiratory capacity, and it can damage tissues in other vital organs, such as the heart, central nervous system, kidneys, and liver.¹
10. The case fatality rate can be significantly higher depending on the presence of certain demographic and health factors. The case fatality rate is higher in men, and varies significantly with advancing age, rising after age 50, and above 5% (1 in 20 cases) for those with pre-existing medical conditions including cardio-vascular disease, respiratory disease, diabetes, and immune compromise.
11. Among patients who have more serious disease, some 30% will progress to Acute Respiratory Distress Syndrome (ARDS) which has a 30% mortality rate overall, higher in those with other health conditions. Some 13% of these patients will require mechanical ventilation, which is why intensive care beds and ventilators have been in insufficient supply in Italy, Iran, and in parts of China.
12. COVID-19 can severely damage lung tissue, which requires an extensive period of rehabilitation, and in some cases, cause permanent loss of breathing capacity. COVID-19 may also target the heart, causing a medical condition called myocarditis, or inflammation of the heart muscle. Myocarditis can reduce the heart's ability to pump.
13. People over the age of fifty face a greater risk of serious illness or death from COVID-19. According to the World Health Organization February 29, 2020 preliminary report, individuals age 50-59 had an overall mortality rate of 1.3%; 60-69-year-olds had an overall 3.6% mortality rate, and those 70-79 years old had an 8% mortality rate.²
14. People of any age who suffer from certain underlying medical conditions, including lung disease, heart disease, chronic liver or kidney disease (including hepatitis and dialysis patients), diabetes, epilepsy, hypertension, compromised immune systems (such as from cancer, HIV, or autoimmune disease), blood disorders (including sickle cell disease), inherited metabolic disorders, stroke, developmental delay, and asthma, also have an elevated risk. The World Health Organization February 29, 2020 report estimated that the mortality rate for those with cardiovascular disease was 13.2%, 9.2% for diabetes, 8.4% for hypertension, 8.0% for chronic respiratory disease, and 7.6% for cancer.
15. COVID-19 is widespread. Since it first appeared in Hubei Province, China, in late 2019, outbreaks have subsequently occurred in more than [209] countries and all populated continents, heavily affected countries include Italy, Spain, Iran, South Korea, and the US, now the world's most affected country. As of April 5, 2020, there have been 1,252,265 confirmed human cases globally, 68,413 known deaths, and some 258,000 persons have

¹ Centers for Disease Control, *Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease (COVID-19)*, <https://cutt.ly/etRPVRI>

² Age, Sex, Existing Conditions of COVID-19 Cases and Deaths Chart, <https://www.worldometers.info/coronavirus/coronavirus-age-sex-demographics/> (data analysis based on WHOChina Joint Mission Report, *supra*).

recovered from the infection. The pandemic has been termed a global health emergency by the WHO. It is not contained and cases are growing exponentially.

16. COVID-19 is now known to be fully adapted to human to human spread. This is almost certainly a new human infection. This means that there is no pre-existing or “herd” immunity, allowing for very rapid chains of transmission once the virus is circulating in communities.
17. The U.S. CDC estimates that the reproduction rate of the virus (referred to as the R_0) is 2.4-3.8, meaning that each newly infected person is estimated to infect on average 3 additional persons. This is highly infectious and only the influenza pandemic of 1918, (which killed between 17 and 50 million people worldwide) is thought to have higher infectivity. This again, is likely a function of all human populations not having pre-existing immunity and currently being highly susceptible.
18. The attack rate, the proportion of people exposed who contract the disease, is also high, estimated at 20-30% depending on community conditions, but may be as high as 80% in some settings and populations, including in closed settings such as nursing homes, ships, and detention facilities. The incubation period is thought to be 2-14 days, which is why isolation is generally limited to 14 days. It is important to note that infected people can be contagious during the incubation period, even before they manifest any symptoms.
19. The best way to slow and prevent spread of the virus is through “social distancing.” Social distancing involves avoiding human contact, and staying at least six feet away from other people. Even vigilant efforts to improve personal hygiene will not be enough to slow the spread of COVID-19. Consequently, every American institution—from [schools](#) to [places](#) of worship, from [businesses](#) to [legislatures](#)—have either dramatically reduced the number of people in close quarters, or closed entirely.

The risks of COVID-19 in detention facilities

20. People in congregate environments, which are places where people live, eat, and sleep in close proximity, face increased danger of contracting COVID-19, as already evidenced by the rapid spread of the virus in cruise ships and nursing homes. On April 4, 2020, Maryland reported the presence of COVID-19 in 60 of its nursing homes ([source](#)). This includes more than 90 cases among residents and staff at Pleasant View Nursing Home ([source](#)).
21. Detention centers are congregate environments. COVID-19 poses a serious risk to inmates and workers in detention facilities. Detention facilities, including jails, prisons, and other closed settings, have long been known to be associated with high transmission probabilities for infectious diseases, including tuberculosis, multi-drug resistant tuberculosis, MRSA (methicillin resistant staph aureus), and viral hepatitis.
22. Infections that are transmitted through droplets, like influenza and SARS-nCoV-2 virus, are particularly difficult to control in detention facilities, as 6-foot distancing and proper decontamination of surfaces is virtually impossible. For example, several deaths were reported in the US in immigration detention facilities associated with ARDS following influenza A, including a 16-year old male immigrant child who died of untreated ARDS in custody in May 2019.
23. There are a number of features of detention facilities that can heighten risks for exposure, acquisition, transmission, and clinical complications of these infectious diseases. These

include physical/mechanical risks such as overcrowding, population density in close confinement, insufficient ventilation, shared toilet, shower, and eating environments and limits on hygiene and personal protective equipment such as masks and gloves in some facilities. In addition to these factors, I understand:

- a. It is virtually impossible for people who are confined in prisons, jails, and detention centers to engage in the necessary social distancing required to mitigate the risk of transmission, particularly at typical population levels that involve dorm, pod and double-cell housing.
 - b. Hot water, soap, and paper towels are often in limited supply. Limits on soap (copays are common) and hand sanitizer, since it can contain alcohol, are also risks for spread.
 - c. Incarcerated people, rather than professional cleaners, are responsible for cleaning the facilities and often are not given appropriate supplies.
 - d. Correctional facilities frequently have insufficient medical care for the population even outside times of crisis.
24. Additionally, the high rate of turnover and population mixing of staff and detainees increases likelihoods of exposure. Reported outbreaks of COVID-19 in multiple detention facilities in China are associated with introduction into facilities by staff. Similarly, for the outbreak at Riker's Island in New York City, majority of early cases were among prison staff, not inmates. The early evidence from Maryland also suggests it is following this trend -- the initial reports from the Department of Public Safety and Correctional Services indicate that five times as many staff have been infected as incarcerated persons.³
25. The evidence concerning COVID-19 indicates that once it enters a detention center, it spreads significantly faster inside the detention center than outside. During the peak of the outbreak in Wuhan, China —the province where COVID-19 originated—over half of all reported COVID-19 cases were incarcerated people. In the United States, this is demonstrated by dramatic outbreaks in the Cook County jail,⁴ and Rikers Island in New York City, where the transmission rate for COVID-19 is estimated to be the highest in the world.⁵ Based on the evidence I have seen, I estimate the reproduction rate of the virus in prisons The U.S. CDC estimates that the reproduction rate of the virus (R_0) in jails to be 4-5, meaning that each newly infected person is estimated to infect on average 4 or 5 additional persons.
26. In addition to the nature of the prison environment, prison and jail populations are also at additional risk, due to high rates of chronic health conditions and aging and chronically ill populations who may be vulnerable to more severe illnesses after infection, and to death from COVID-19 disease.

³ Kyle Parsons, *Md. Dept. of Public Safety and Correctional Services Reports 17 COVID-19 Cases*, WBOC (Apr. 3, 2020).

⁴ Sam Kelly, *134 inmates at Cook County Jail confirmed positive for COVID-19*, CHICAGO SUN-TIMES (Mar. 30, 2020), <https://cutt.ly/6tYTqi5>.

⁵ LEGAL AID SOCIETY, *Analysis of COVID-19 Infection Rate in NYC Jails* (last visited March 30, 2020, 11:00 AM), <https://cutt.ly/RtYTbWd>

The risks of community spread from detention facilities

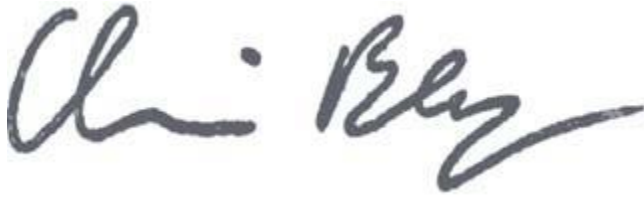
27. The history of severe epidemics indicates that once an epidemic is in a prison, it is likely to spread back into the community.
28. For example, severe epidemics of Tuberculosis in prisons in Central Asia and Eastern Europe was demonstrated to increase *community* rates of Tuberculosis in multiple states in that region. This is the case for several reasons. First, correctional officers and other staff go back to their communities every day. Because individuals can be infected with and spread COVID-19 without or before they manifest symptoms, screening may not detect when a staff member has become infected. In other words, the possibility of asymptomatic transmission means that monitoring fever of staff or detainees is inadequate for identifying all who may be infected and preventing transmission. While I understand that the Otay Mesa Detention Center has stated it is conducting temperature checks and administering a screening questionnaire, I do not believe such screening is sufficient to prevent spread of COVID-19 back into the community since it is now known that asymptomatic persons with normal temperatures can be infected with COVID-19 and infectious for others.
29. Second, detention facilities typically lack the necessary medical facilities to isolate or treat persons infected with COVID-19. As discussed above, COVID-19 can cause serious medical conditions, including Acute Respiratory Distress Syndrome (ARDS), other types of severe lung tissue damage, diminished breathing capacity, and heart conditions including myocarditis. These are serious medical conditions that require hospitalization. To the extent incarcerated persons develop any of these conditions, they will need to be hospitalized, placing a toll on community hospitals.
30. Given these factors, it is a near certainty that a COVID-19 outbreak cannot and will not be contained within a prison's walls. Rather, it will reemerge back into the community. This in turn will undermine the efforts California has made to date to reduce spread of the virus.

Conclusion and Recommendations

31. Given the experience in China as well as the literature on infectious diseases in jail, additional outbreaks of COVID-19 among the U.S. jail and prison populations are highly likely. Releasing as many inmates as possible is important to protect the health of inmates, the health of correctional facility staff, the health of health care workers at jails and other detention facilities, and the health of the community as a whole.
32. While every effort should be made to reduce exposure in detention facilities, this may be extremely difficult to achieve and sustain. It is therefore an urgent priority in this time of public health emergency to reduce the number of persons in detention as quickly as possible.

Pursuant to 28 U.S.C. 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed this 16h day of April, 2020.

A handwritten signature in dark ink, appearing to read "Chris Beyrer". The signature is fluid and cursive, with a long horizontal stroke at the end.

Professor Chris Beyrer

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